great, and as most parts require more or less drilling, jigs are made in an almost endless variety of sizes and forms. When all the holes to be drilled in a certain part are parallel, and especially if they are all in the same plane, a very simple form of jig can ordinarily be used.

Box Jigs. — A great many machine parts must be drilled on different sides atnd frequently castings or forgings are very irregular in shape, so that a jig which is made somewhat in

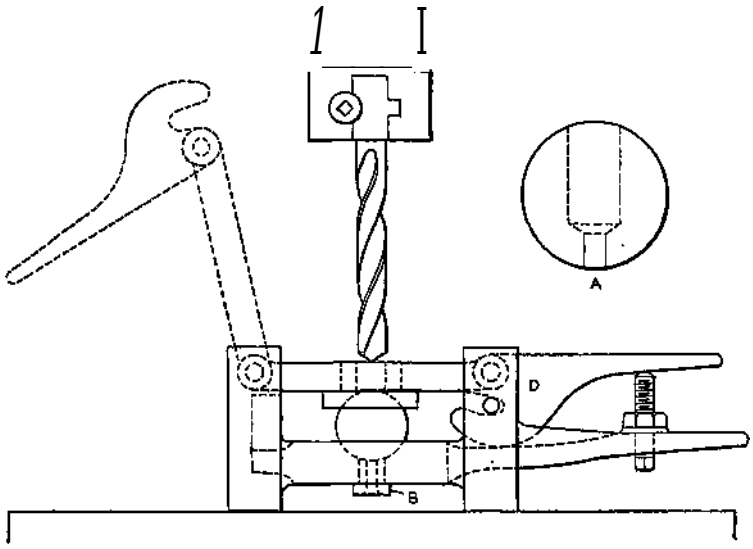

Fig. 3. Box Jig for Drilling Ball shown enlarged at *A*

the form of a box, and encloses the work, is very essential, as it enables the guide bushings to be placed on all sides and also makes it comparatively easy to locate and securely clamp the part in the proper position for drilling. This type of jig, which, because of its form, is known as a closed or "box jig," is used very extensively.

A box jig of simple design is shown in Fig. 2. This particular jig is used for drilling four small holes in a part (not shown) which is located with reference to the guide bushings *B* by a central pin *A* attached to the jig body. This pin enters a hole in the work, which is finished in another machine in connection